Gilbert Urban Wildlife Habitat and Percolation Ponds Management Plan

Ongoing management of the wildlife habitat and percolation ponds will include maintenance of the ponds, vegetation and wildlife. Maintenance will entail physical monitoring by Town staff and volunteers to gather data during the life of the project.

Vegetation

Planted and seeded vegetation on the project site will require ongoing maintenance to ensure that it becomes established and meets the project intent of providing valuable habitat for wildlife. Maintenance activities will need to respond to management requirements for the percolation ponds, information gained from vegetation monitoring, and public safety concerns. The primary activities for vegetation management will be providing adequate water to riparian vegetation and marsh species, weeding and mowing embankments, and planting of forage areas for wildlife.

Providing water for establishment and growth of riparian vegetation and marsh plants will be accomplished through management of water supplies and pond levels. For riparian vegetation planted as cuttings, providing adequate water to the root zone during the first year is important. As additional cuttings are planted this pattern will be followed. Moisture levels in the root zone of cuttings will be monitored biweekly during spring and fall months and weekly during summer months. Moisture will be available to the root zone, but the upper 12-18 inches of soil will be allowed to dry out periodically. This system of providing water to the cuttings will allow for optimum growth while preventing over saturation and rotting. Monitoring will continue for the minimum 15 year program identified in the grant.

The rotation cycle for providing water to each percolation pond will be adjusted if plants begin to show signs of stress during the initial periods of growth. Supplemental watering, through drip irrigation, will be provided to other riparian plants not located near the water level of the ponds. After the second year, all plants should be well established with deep enough roots for longer watering cycles.

Water in the permanent pond located near the viewing ramada will be maintained at levels that support growth of marsh species. During the minimum 15 year period, the permanent pond will be managed with the goal of providing equal areas of marsh vegetation and open water. Cattails, which may quickly become the dominant aquatic vegetation in the pond, will be removed periodically.

The surface of the percolation basins is disked several times a year as a regular activity required to keep adequate percolation rates. A buffer zone of 3-4 feet is being provided

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around the riparian cuttings to protect their roots from damage by disking. As the trees mature, the buffer will be further defined by overhanging branches.

Areas that did not have significant growth from cuttings will be identified during the first 3 years for further planting. Cuttings from existing trees at the ponds will be used as a supply to supplement plantings. These plantings will take place during the winter dormant season.

In order to provide adequate cover for wildlife and erosion control, seeded areas will also be closely monitored during the first 2 years and reseeding will take place on an as needed basis.

Weeding of seeded areas will be performed at least twice during each of the first 2 years following initial seeding. Weeding activities will remove invasive exotic species as much as possible and will be done using hand methods (e.g. hoes, shovels, rakes,etc.). Weeding will occur at times and using methods that minimize disturbance to wildlife, especially during breeding season. Any volunteer effort will entail training about nesting areas and other significant detail. No herbicides will be applied during active wildlife breeding seasons or important times for migration activities. The town will consult with a wildlife biologist or a Game and Fish Department wildlife expert prior to weeding activities that may involve limited application of herbicides at other times of the year. In the case of the permanent pond, hand methods will be used and care taken to remove entire invasive plants while protecting beneficial and less aggressive plants such as bulrush and sedge.

The monitoring of the success of the vegetation in and around the ponds will be important to compare with information on wildlife sightings. The abundance of plant material may determine the success of wildlife attraction. The first several years of plant monitoring will involve quantitative data on survivorship. Town of Gilbert staff and volunteers will document the number and survival rates of plant species and periodically use expert opinions on plant survival. Photographic documentation (pictures taken from designated photographic points) will be used to compare vegetation growth on a year-to-year basis. The Town may also set transects to further assess plant success.

The following will be observed during the life of the project:

* native grassland success as an estimate of percent cover,

* native forb and shrub species success from seed and their relative abundance,

* native woody riparian species that are observed colonizing the site and their relative abundance,

* weed problems and recommendations for removal of invasive exotics,

* plant vigor by species based on growth during last sampling,

* vegetation patterns, and

* physical factors that appear to be affecting vegetation growth, such as sedimentation, erosion and disturbance.

The survival rate of riparian cuttings is expected to be approximately 40%. An assessment of this objective will be made after the first year of each phase. If the rate is lower in either phase, causes for the failure will be identified and replanting will be done by volunteer effort.

The survival rate for seeded and planted areas should be at least 25% coverage of ground surface after one year and 50% after two years. Weed management will be ongoing, as outlined, to control exotic species.

Overall monitoring will take place at least twice per year for the first two years and once a year each year thereafter. The timeframe for monitoring will be once following the winter rainy season (March to April) and once after the summer monsoon (August to September). The schedule, after the first two years, will be adjusted to annually during the spring.

Wildlife and Wildlife Structures

Long-term management and maintenance of the wildlife environment is an important element of the habitat and percolation ponds. Wildlife using the area will be monitored and structures will be cleaned and maintained.

Nest and roost boxes will require a continuing maintenance program. The boxes will be inspected annually for use and also for damage that may need repair. The boxes will be cleaned each year to remove nest material, eggshell fragments, and fecal material. New nest material will be added, as needed. Since nesting generally begins in February, general maintenance will take place each year prior to that time. In addition to maintenance, the Town will monitor use of the platforms and boxes on an annual basis. Monitoring will be done with the help of volunteers from organizations such as the Boy Scouts, Schools and Audubon Society. Care will be taken to ensure that all maintenance activities for nesting structures will take place prior to the breeding season in order to minimize disturbance.

The monitoring of wildlife structures will document the success of providing nesting and roosting habitat. Annual reporting forms will be prepared and used to monitor numbers of species, breeding success, etc. Surveys will be conducted by qualified volunteers and/or professional wildlife biologists.

Bat boxes will be monitored at least three times during the spring months and three times during the fall and winter to determine use of the structures. The boxes will be monitored day and night to determine level of use by bats. After three years, or until trees can offer enough shade to the structures, an evaluation of the box locations will be made and a determination of whether the structures should be moved to other locations at the ponds.

The raptor roost located at the northeast corner of the site will be monitored with other boxes during the spring breeding season.

It is anticipated that other wildlife associated with riparian habitat may be introduced to this site. This may include owls, turtles, frogs, fish, etc. As these species are introduced into the area, a monitoring program will be devised to check success of the species in the habitat.

Domestic Duck Control

During the life of the project, use of the ponds by different species of ducks will be carefully monitored. Should the presence of domestic species be detected the Town will contact the Fish and Game Department for advice on removing the ducks. The Town will be proactive during the Easter season in monitoring the site continually for several weeks following the holiday to detect any domestic duck placement. The Town will also monitor use of the area by visitors that may attempt to leave any kind of food source that would tend to attract domestic ducks. Casual monitoring will be continuous each week to check for wildlife that may be detrimental to use of the area by wild species.